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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/530,645	04/06/2005	Dirk Jan Broer	NL02 0968 US	7615
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EXAMINER				
MCPHERSON, JOHN A				
ART UNIT		PAPER NUMBER		
1795				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/530,645

Applicant(s)

BROER ET AL.

Examiner

John A. McPherson

Art Unit

1795

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 April 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 12, 14 and 15 is/are rejected.
- 7) ☒ Claim(s) 10, 11 and 13 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 April 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB-08)
Paper No(s)/Mail Date 4/6/05
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Objections

1. Claim 10 is objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim can not depend from another multiple dependent claim (specifically, claim 8 in the present application). See MPEP § 608.01(n). Accordingly, the claim has not been further treated on the merits.

Information Disclosure Statement

2. The references cited in the Information Disclosure Statement (IDS) filed 4/6/05 have been considered, except for the non-patent literature document "PATENT ABSTRACTS OF JAPAN VOL. 2000, NO.08, 6 OCTOBER 2000". This reference was not considered because a copy was not provided with the IDS. Accordingly, the Examiner has lined through this citation on the PTO 1449.

The Examiner notes that based on the International Search Report this citation appears to be a reference to JP 2000-147479, which the Examiner has listed on the PTO 892 included with this Office Action.

An abstract of JP 2001-325134, having an application number 2000-147479 (the same as the publication number of the document cited in the International Search Report), is present in the file. However, this does not appear to correspond to the missing document cited in the IDS.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 3 and 5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 3 presents an embodiment wherein the first, second and third colors are cyan, magenta and yellow, respectively. However, claim 3 depends from claim 2, which presents an embodiment wherein the first, second and third colors are red, green and blue, respectively. Due to these conflicting limitations, the scope of the protection sought in claim 3 is indefinite. This rejection could be overcome by changing the dependency of claim 3 from claim "2" to claim --1--.

Claim 5 presents an embodiment wherein "and/or, if present, the fourth base material are one and the same material". However, claim 5 depends from claim 4, which comprises "a forth uniaxially ordered base material". The scope of the protection sought by claim 5 is indefinite because it is unclear if this claim requires the presence of the forth base material, as is stated in claim 4 (from which claim 5 depends) or if the presence of the forth base material is optional, as is stated in claim 5. This rejection could be overcome by deleting ", if present," from line 2 of claim 5.

Additionally, the Examiner notes that the claim dependency of claim 5 should be corrected from "4claim 4" to --claim 4--.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 2, 7-9, 12, 14 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 2000-147479 (JP '479).

JP '479 discloses a color liquid crystal display comprising microcapsules containing dyestuff and a liquid crystal, wherein in one embodiment the dyestuff preferably contains two dichroic dyes and one isotropic dye which form a complementary black (i.e. the dichroic dyes absorb light having the color of the isotropic dye). The black microcapsule consists of the capsule wall, liquid crystal, two dichroic colors, and one isotropic color. In an OFF state, the orientation of the liquid crystal and the color molecules are random, and the appearance of this display becomes black. In an ON state, the liquid crystal and dichroic color molecules have aligned in parallel (i.e. the liquid crystal, corresponding to the base materials of the present invention, is uniaxially oriented) with an impressed electric field, and only the isotropic color is expressed. See the abstracts, paragraphs [0009] and [0013] of the computer-generated translation, and Figure 1.

In other embodiments, black dichroic dyes and isotropic dyes of three primary colors are sealed in separate capsules or dispersed in separate binders. See the abstracts, paragraphs [0009] and [0013] of the computer-generated translation, and Figures 2 and 3

This guest host liquid crystal film serves as a light filter. See paragraph [0001] of the computer-generated translation. The isotropic dye or pigment is red, blue or green colored. See the abstracts.

5. Claim 15 is rejected under 35 U.S.C. 102(b) as being anticipated by EP 0 605 191 [cited in the Information Disclosure Statement filed 4/6/05] EP '191.

EP '191 discloses a polarizing color filter comprising a dye having a spectral transmittance, a dichroic dye having a capability to polarize light, and a base resin, wherein the combination of the transmittance dye and the dichroic dye is such that 1) the transmittance dye is red and the dichroic dye is blue, 2) the transmittance dye is green and the dichroic dye is red, or 3) the transmittance dye is blue and the dichroic dye is yellow (i.e. the dichroic dye absorbs light having the color of the transmittance dye). The base resin is oriented by monoaxial stretching. See page 2, lines 21-25 and page 2, line 53 to page 4, line 10; and Figures 2-7.

6. Claims 1, 2, 7, 12 and 14 are rejected under 35 U.S.C. 102(e) as being anticipated by US 2002/0191142 to Oguchi et al. (Oguchi).

Oguchi discloses a liquid crystal display including a substrate and pixels arrayed on the substrate, each of the pixels including an electric field sensitive layer comprising an N-type liquid crystal material containing a liquid crystal substance, a dichroic dye and an isotropic dye, and particles dispersed in the N-type liquid crystal, wherein the particles are configured to migrate in the N-type liquid crystal by electrophoresis. See the abstract. When the dichroic dye and liquid crystal are aligned substantially perpendicular to the direction of an electric field, the isotropic dye and the dichroic dye absorb light. As a result, where the color of the dichroic dye is complementary to the color of the isotropic dye, an observer recognizes a black color because of subtractive color mixing. When the application of voltage is stopped, the alignment state of the dichroic dye and the liquid crystal changes to vertical, resulting in a decrease in the light absorption of the dichroic dye, so as to cause the observer to recognize the color of the isotropic dye. See paragraphs [0057], [0058] and [0125]-[0130]; and Figures 2 and 4A-C.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 2000-147479 (JP '479) as applied to claims 1, 2, 7-9, 12, 14 and 15 above, and further in view of Applicant's discussion of the prior art in the specification.

The disclosure of JP '479 is set forth above in paragraph 4. However, while JP '479 discloses an embodiment wherein the colors are red, blue and green, JP '479 does not disclose an embodiment wherein the colors are cyan, magenta and yellow, or an embodiment including a forth color (e.g. cyan, magenta, yellow and black).

At page 10, lines 25-30 of the present specification, Applicant discloses that in addition to utilizing red, green and blue regions to obtain full color functionality, other color schemes are possible, such as the well known cyan magenta yellow (CMY) or cyan magenta yellow black (CMYB) scheme. It would have been obvious one skilled in the requisite art to substitute either the cyan magenta yellow (CYM) color scheme or the cyan magenta yellow black (CMYB) color scheme for the red, blue and green colors of JP '479 because, as disclosed by Applicant in the specification, these other color schemes are well known alternatives for providing full color functionality.

8. Claims 1, 2, 6-8 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 4,560,241 to Stolov et al. [cited in the Information Disclosure Statement filed 4/6/05] (Stolov) in view of EP 0 605 191 [cited in the Information Disclosure Statement filed 4/6/05] (EP '191).

Stolov discloses a multicolor filter in the form of a pattern of colored stripes or dots of dichroic transmissive polarizing material. The dichroic polarizers are exemplified

as having the colors red, blue and green. See the abstract; column 1, lines 46-52; column 3, lines 34-46; and column 4, lines 21-35. However, Stolov does not disclose a color filter wherein the red, blue and green dichroic transmissive polarizing materials comprise a uniaxially oriented base material, an isotropic colorant adapted to selectively transmit light of a color, and a dichroic colorant uniaxially aligned by the base material and adapted to absorb light of the color.

EP '191 discloses a polarizing color filter comprising a dye having a spectral transmittance, a dichroic dye having a capability to polarize light, and a base resin, wherein the combination of the transmittance dye and the dichroic dye is such that 1) the transmittance dye is red and the dichroic dye is blue, 2) the transmittance dye is green and the dichroic dye is red, or 3) the transmittance dye is blue and the dichroic dye is yellow (i.e. the dichroic dye absorbs light having the color of the transmittance dye). The base resin is oriented by monoaxial stretching. See page 2, lines 21-25 and page 2, line 53 to page 4, line 10; and Figures 2-7.

It would have been obvious to utilize the red, green and blue color filters comprising a transmittance dye, a dichroic dye and a monoaxially stretched base resin, as taught by EP '191, to form the stripes or dots of red, green and blue dichroic transmissive polarizing material in the multicolor filter of Stolov because it is taught that color filters comprising a transmittance dye, a dichroic dye and a monoaxially stretched base resin have excellent transmittance and polarizing power.

9. Claims 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 4,560,241 to Stolov et al. (Stolov) in view of .EP 0 605 191 (EP '191) as applied to claims 1, 2, 6-8 and 14 above, and further in view of Applicant's discussion of the prior art in the specification.

The disclosures of Stolov and EP '191 are forth above in paragraph 8. However, while Stolov and EP '191 each disclose an embodiment wherein the colors are red, blue and green, neither Stolov nor EP '191 disclose an embodiment wherein the colors are cyan, magenta and yellow, or an embodiment including a forth color (e.g. cyan, magenta, yellow and black).

At page 10, lines 25-30 of the present specification, Applicant discloses that in addition to utilizing red, green and blue regions to obtain full color functionality, other color schemes are possible, such as the well known cyan magenta yellow (CMY) or cyan magenta yellow black (CMYB) scheme. It would have been obvious one skilled in the requisite art to substitute either the cyan magenta yellow (CYM) color scheme or the cyan magenta yellow black (CMYB) color scheme for the red, blue and green colors of Stolov in view of EP '191 because, as disclosed by Applicant in the specification, these other color schemes are well known alternatives for providing full color functionality.

Allowable Subject Matter

10. Claims 11 and 13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John A. McPherson whose telephone number is (571) 272-1386. The examiner can normally be reached on Monday through Friday, 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Huff can be reached on (571) 272-1385. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/John A. McPherson/
Primary Examiner, Art Unit 1795

JAM
1/30/09